

Sunday, July 24, 2011	
4:00 pm – 8:00 pm	Registration
6:00 pm – 7:00 pm	Student Participant Orientation
7:00 pm – 9:30 pm	Welcome Reception

Monday, July 25, 2011	
8:00 am	Registration opens
8:30 am – 10:00 am	MHD Tutorial Session
8:40 am – 9:20 am	<a href="#">J. Dreher, "Magnetohydrodynamics Tutorial 1"</a>
9:20 am – 10:00 am	<a href="#">J. U. Brackbill, "Magnetohydrodynamics Tutorial 2"</a>
10:00 am – 10:20 am	Refreshment Break
10:20 am – 12:20 am	Symposium 1 (Chair, Joachim Birn)
10:20 am – 10:50 am	<a href="#">M. Opher, "Solar wind and interstellar medium interactions"</a>
10:50 am – 11:20 am	<a href="#">R. J. Walker, "Simulating Planetary Magnetospheres: An example from Saturn"</a>
11:20 am – 11:50 am	<a href="#">J. Büchner, "Simulation of reconnection in the solar corona"</a>
11:50 am – 12:10 pm	<a href="#">T. V. Laitinen, "Studying magnetic reconnection with a magnetospheric global MHD code"</a>
12:10 pm – 12:20 pm	Discussion
12:20 pm – 1:30 pm	Lunch
1:30 pm – 3:30 pm	Hands-on Session: MHD codes and exercises (i) Dreher and (ii) <a href="#">Brackbill</a>
3:30 pm – 3:50 pm	Refreshment Break
3:50 pm – 6:00 pm	Symposium 2 (Chair, Ray Walker)
3:50 pm – 4:20 pm	<a href="#">J. Birn, "MHD simulations of magnetotail reconnection"</a>
4:20 pm – 4:40 pm	<a href="#">J. Yang, "Accelerated thinning and X-line formation in the near-Earth plasma sheet caused by a bubble-blob pair"</a>
4:40 pm – 5:10 pm	<a href="#">J. Dorelli, "GPU Accelerated Hall MHD simulations of reconnection"</a>
5:10 pm – 5:40 pm	<a href="#">J. D. Huba, "Modeling the Earth's ionosphere"</a>
5:40 pm – 6:00 pm	<a href="#">M. R. Bareford, "The energy liberated, via ideal kink instability, from current-neutralised coronal loops"</a>
6:00 pm	Session ends

Tuesday, July 26, 2011	
<b>8:30 am – 10:00 am</b>	<b>Test Particle and Hybrid Simulation Tutorial Session</b>
8:30 am – 9:20 am	<u>V. Perroomian, “<a href="#">Test Particle Simulation Tutorial</a>”</u>
9:20 am – 10:15 am	<u>D. Burgess, “<a href="#">Hybrid Simulation Tutorial</a>”</u>
<b>10:15 am – 10:50 am</b>	<b>Refreshment Break</b>
<b>10:50 am – 12:20 pm</b>	<b>Symposium 3 (Chair, Richard Marchand)</b>
10:50 am – 11:20 am	<u>M. L. Goldstein, “<a href="#">Multifluid simulations of the global solar wind including pickup ions and turbulence modeling</a>”</u>
11:20 am – 11:50 am	<u>R. Rankin, “<a href="#">Modeling the global magnetosphere using MHD application codes</a>”</u>
11:50 am – 12:10 pm	<u>E. Richer, “<a href="#">Reflection of planetary pick-up protons on the Martian bow shock: A simulation study</a>”</u>
12:10 pm – 12:20 pm	Discussion
<b>12:20 pm – 1:30 pm</b>	<b>Lunch</b>
<b>1:30 pm – 3:30 pm</b>	<b>Hands-on Session: Hybrid &amp; test-particle codes, <u>(i)Perroomian</u> and <u>(ii)Burgess</u></b>
<b>3:30 pm – 3:50 pm</b>	<b>Refreshment Break</b>
<b>3:50 pm – 6:00 pm</b>	<b>Symposium 4 (Chair, Konrad Sauer)</b>
3:50 pm – 4:20 pm	<u>R. M. Winglee, “<a href="#">Multi-fluid/multi-scale simulations and their application in the terrestrial magnetosphere: Substorm Onset</a>”</u>
4:20 pm – 4:50 pm	<u>D. Schriver, “<a href="#">Global kinetic simulations of Mercury’s magnetosphere and comparison with Messenger spacecraft observations</a>”</u>
4:50 pm – 5:20 pm	<u>F. Califano, “<a href="#">Nonlinear dynamics at the interface between the solar wind and the Earth’s magnetosphere driven by shear flow instabilities</a>”</u>
5:20 pm – 5:50 pm	<u>A. T. Y. Lui, “<a href="#">What substorm phenomena are best for simulation/observation comparison?</a>”</u>
5:50 pm – 6:00 pm	Discussion
<b>6:00 pm – 8:00 pm</b>	<b>Dinner</b>
<b>8:00 pm – 10:00 pm</b>	<b>Poster Session 1</b>

Wednesday, July 27, 2011	
<b>8:30 am – 10:00 am</b>	<b>Particle-in-Cell Simulation Tutorial Session</b>
8:30 am – 9:15 am	<u>V. K. Decyk</u> , <a href="#">“Particle-in-Cell Simulation Tutorial 1”</a>
9:15 am – 10:00 am	<u>G. Lapenta</u> , <a href="#">“Particle-in-Cell Simulation Tutorial 2”</a>
<b>10:00 am – 10:20 am</b>	<b>Refreshment Break</b>
<b>10:20 am – 12:20 pm</b>	<b>Symposium 5 (Chair, Clare Watt)</b>
10:20 am – 10:50 am	<u>Y. Omura</u> , <a href="#">“Particle simulations of whistler-mode chorus and electromagnetic ion cyclotron waves”</a>
10:50 am – 11:20 am	<u>H. Usui</u> , <a href="#">“Full PIC simulation on solar wind interaction with a small-scale artificial magnetosphere”</a>
11:20 am – 11:50 am	<u>H. Karimabadi</u> , <a href="#">“New understanding of magnetic reconnection from petascale kinetic simulations”</a>
11:50 am – 12:20 pm	<u>K. Fujimoto</u> , <a href="#">“AMR-PIC model and application to magnetic reconnection”</a>
<b>12:20 pm – 1:30 pm</b>	<b>Lunch</b>
<b>1:30 pm – 3:30 pm</b>	<b>Hands-on session: PIC codes, Viktor Decyk</b>
<b>3:30 pm – 3:50 pm</b>	<b>Refreshment Break</b>
<b>3:50 pm – 5:30 pm</b>	<b>Symposium 6 (Chair, David Burgess)</b>
3:50 pm – 4:20 pm	<u>B. Lembège</u> , “Numerical simulations of collisionless shocks: A tutorial approach”
4:20 pm – 4:50 pm	<u>S. Matsukiyo</u> , <a href="#">“Full Particle-in-Cell simulation on collisionless shocks: electron and ion dynamics in the transition region”</a>
4:50 pm – 5:10 pm	<u>F. Guo</u> , <a href="#">“Electron acceleration by collisionless shocks containing large-scale magnetic turbulence”</a>
5:10 pm – 5:40 pm	<u>K. Sauer</u> , <a href="#">“General aspects of whistler wave generation: Transition from unstable to stationary nonlinear waves”</a>
5:40 pm – 5:50 pm	Discussion
<b>6:00 pm – 8:00 pm</b>	<b>Dinner</b>
<b>8:00 pm – 10:00 pm</b>	<b>Poster Session 2</b>

Thursday, July 28, 2011	
<b>8:30 am – 10:00 am</b>	<b>Gyrokinetics and Multi-fluids Tutorial Session</b>
8:30 am – 9:15 am	<u>Y. Chen</u> , <a href="#">“Introduction to Particle-in-Cell gyrokinetic simulations”</a>
9:15 am – 10:00 am	<u>K. Sauer</u> , <a href="#">“Multi-fluid simulation Tutorial”</a>
<b>10:00 am – 10:20 am</b>	<b>Refreshment Break</b>
<b>10:20 am – 12:00 pm</b>	<b>Symposium 7 (Chair, Shuichi Matsukiyo)</b>
10:20 am – 10:50 am	<u>N. Bessho</u> , <a href="#">“Fast magnetic reconnection and particle acceleration in low-density relativistic electron-positron plasmas”</a>
10:50 am – 11:20 am	<u>K. Nishikawa</u> , <a href="#">“Simulation of relativistic jets: Particle acceleration and associated self-consistent radiation”</a>
11:20 am – 11:50 am	<u>D. A. Leahy</u> , <a href="#">“Hot plasma emission from supernova remnants”</a>
11:50 am – 12:00 pm	Discussion
<b>12:00 pm – 7:30 pm</b>	<b>Free time</b>
<b>7:30 pm – late</b>	<b>Banquet/BBQ</b>

Friday, July 29, 2011	
<b>8:30 am – 10:00 am</b>	<b>Vlasov Simulation Tutorial Session</b>
8:30 am – 9:15 am	<u>T. Umeda, “Recent advancement in Vlasov code simulations”</u>
9:15 am – 10:00 am	<u>F. Califano, “Turbulence transition across the ion cyclotron frequency: a Vlasov approach”</u>
<b>10:00 am – 10:20 am</b>	<b>Refreshment Break</b>
<b>10:20 am – 12:00 pm</b>	<b>Symposium 8 (Chair, Juergen Dreher)</b>
10:20 am – 10:50 am	<u>C. E. J. Watt, “Drift-kinetic Vlasov simulations of shear Alfvén waves and electron acceleration”</u>
10:50 am – 11:20 am	<u>I. Silin, “Hybrid Fourier-Vlasov simulation in non-inertial reference frames”</u>
11:20 am – 11:50 am	<u>V. Sotnikov, “Scattering of electromagnetic waves on turbulent pulsations inside a plasma sheath”</u>
11:50 am – 12:00 pm	Discussion
<b>12:00 pm – 1:30 pm</b>	<b>Lunch</b>
<b>1:30 pm – 3:30 pm</b>	<b>Hands-on session: Vlasov codes (i) <u>C. Watt</u> and (ii) I. Silin</b>
<b>3:30 pm – 3:50 pm</b>	<b>Refreshment Break</b>
<b>3:50 pm – 6:00 pm</b>	<b>Symposium 9 (Chair, Hideyuki Usui)</b>
3:50 pm – 4:20 pm	<u>V. Decyk, “Particle-in-Cell codes for graphical processing units”</u>
4:20 pm – 4:50 pm	<u>A. Kageyama, “Immersive Visualisation in CAVE”</u>
4:50 pm – 5:20 pm	<u>D. Cai, “Magnetic reconnection in magnetosphere analyzed by field topology: application to the magnetotail and the subsolar region”</u>
5:20 pm – 5:40 pm	<u>Pembroke, “Magnetospheric Visualization and global measurement: analysis techniques for MHD models”</u>
<b>5:40 pm</b>	<b>Session ends</b>

Saturday, July 30, 2011	
<b>8:30 am – 12:00 pm</b>	<b>Hands-on Sessions</b>
	Follow-up on the week’s exercises
<b>12:00 pm – 12:20 pm</b>	<b>Closing remarks</b>
<b>12:20 pm – 1:30 pm</b>	<b>Lunch/End of ISSS-10</b>

Poster Session 1 – Tuesday, July 26, 2011		
P1	Abdul, Reginald	"Simulation of space plasmas with kappa distributions"
P2	Aceves, Hector	"Turbulent dynamics of pickup ions in Mars"
P3	Adamson, Eric	"Examination of the heating process associated with solar coronal bright points through a parallel implementation of the LINMOD3D MHD code"
P4	Bard, Chris	"GPU-Accelerated ideal magnetohydrodynamics"
P5	Blanco, Mauricio	"Electron acceleration by inertial Alfvén waves"
P6	Borremans, Kris	"3D model of the plasmasphere"
P7	Chang, Ouliang	"Forward cascade of whistler turbulence: 3D particle-in-cell simulations on parallel supercomputer"
P8	Chernyshov, Alexander	"Forced turbulence in large-eddy simulation of space plasma"
P9	Ehsan, Zahida	"Shock wave formation in cometary dusty plasma"
P10	Friedrich, Erena	"Solar wind - Mars interactions: Energetic neutral atom production"
P11	Fu, Song	"Ion dynamics associated with substorm depolarization fronts"
P12	Furuta, Atsuya	"Simulation and visualization of a liquid metal convection experiment"
P13	Groeller, Hannes	"Monte-Carlo simulation of the hot atom corona around planets "
P14	Guerrero, Antonio	"Geo-effective multi-structure events of the current solar cycle"
P15	Hashimoto, Akihiko	"3D Plasma particle simulation of neutralization process of ion beam engine"
P16	Kozawa, Hiroyuki	"Particle-in-Cell simulation on spacecraft plasma environment using EMSES-Development of a GUI tool for satellite modeling"
P17	Hoque, Azizul	"Temporal evolution of the open-closed field line boundary determined using SUPERDARN Radar velocity gradients"
P18	Hu, Bei	"Consequences of violation of frozen-in-flux - evidence from OpenGGCM simulations"
P19	Imtiaz, Nadia	"Inclusion of Perturbed Magnetic Field in the Mid-Latitude Ionosphere Model SAMI 2"
P20	Ito, Yosuke	"Vlasov simulation of the interaction between the solar wind and a dielectric body with magnetic anomaly"
P21	Kidani, Yoshitaka	"On the reformation at perpendicular shocks: full particle-in-cell simulations"
P22	Kouznetsov, Alexei	"Generalized leapfrog method with variable time steps and its ability to map solar energetic proton distributions onto the upper atmosphere"
P23	Lee, Kun-Han	"2D Simulations of beam and cyclotron maser instabilities associated with an electron ring-beam distribution"

## Poster Session 2 – Wednesday, July 27, 2011

P24	Leahy, David	"SUZAKU and XMM-NEWTON observations of hot plasma emission from the Cygnus Loop"
P25	Liang, Haoming	"In situ measurement of Alfvén turbulence spectra in solar wind plasmas"
P26	Marchand, Richard	"Modeling of LEO spacecraft interaction with space environment"
P27	Miyake, Yohei	"Particle-in-Cell simulations on plasma environment around spacecraft - onboard electric field sensors"
P28	Ozak, Nataly	"Auroral ion precipitation at Jupiter"
P29	Pan, QianJiang	"Revisiting magnetic reconnection: What breaks magnetic field lines?"
P30	Pechhacker, Roman	"PIC simulations of Type III radio bursts"
P31	Ream, Jodie	"The relationship between dipolarization fronts and P12 pulsations in the near-Earth magnetotail - A MHD case study"
P32	Russell, Alexander	"Inertial MHD simulations using an explicit numerical scheme"
P33	Saeed, Rehman	"Spacecraft interaction with space plasma in the presence of photo and secondary electron emission"
P34	Sotnikov, Vladimir	"Plasma diagnostics with dynamic logic algorithm"
P35	Stanier, Adam	"Particle acceleration at null points in the solar corona"
P36	Sun, Peng	"Charged-particle transport in anisotropic magnetic turbulence"
P37	Szalay, Jamey	"Dusty plasma effects on the lunar surface"
P38	Tenerani, Anna	"Low frequency structures and whistlers during a substorm: simulations and observations"
P39	Usanova, Maria	"Generation of anisotropic particle distributions in a compressed dayside magnetosphere"
P40	Voitcu, Gabriel	"Forward and backward test-kinetic simulation approaches to investigate space plasma dynamics in discontinuity regions"
P41	Yagi, Yohei	"Parallelization of plasma particle simulation with dynamic domain decomposition"
P42	Yamamoto, Takumi	"Plasma particle simulation with GPGPU"
P43	Yamaura, Yuki	"Multiverse: A virtual reality framework for immersive visualizations"
P44	Yang, Jian	"RCM-E simulation of ion acceleration during an idealized plasma-sheet bubble injection"
P45	Zellinger, Michael	"2D MHD simulation of the Kelvin-Helmholtz instability around Venus"
P46	Zhou, Meng	"Revealing the sub-structures of separatrix of magnetic reconnection by kinetic"

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